

Note	CODE1	APPEND_C HAR	CODE1 + APPEND_C HAR	new code added to Dictionary	output
Begin compression	65 ("A")	66 ("B")	"AB"		
"AB" is not found in the dictionary, output code1					65 ("A")
Add it to the dictionary				256 ("AB")	
	66 ("B")	65 ("A")	"BA"		
"BA" is not found in the dictionary, output code1					66 ("B")
Add it to the dictionary				257 ("BA")	
	"A"	"B"	"AB"		
"AB" is found in the dictionary, change code1	"AB"	"A"	"ABA"		
"ABA" not in the dictionary, output code1					256 ("AB")
Add it to dictionary				258 ("ABA")	
	"A"	"B"	"AB"		
"AB" is in the dictionary, change code1	"AB"	"A"	"ABA"		
"ABA" is in the dictionary, change code1	"ABA"	"B"	"ABAB"		
"ABAB" not in the dictionary, output					258 ("ABA")
Add it to dictionary				259 ("ABAB")	
	"B"	"A"	"BA"		
"BA" found in the dictionary	"BA"	"B"	"BAB"		
"BAB" not in the dictionary					257 ("BA")
Add it to the dictionary				260 ("BAB")	
	"B"	"A"	"BA"		
"BA" found	"BA"	"B"	"BAB"		
"BAB" found	"BAB"	"A"	"BABA"		
"BABA" not in the dictionary					260("BAB")
Add it to the dictionary				261("BABA ")	
	"A"	"B"	"AB"		
"AB" found	"AB"	"A"	"ABA"		
"ABA" found	"ABA"	"B"	"ABAB"		
"ABAB" found	"ABAB"				
End of file reached. Output CODE1					259("ABAB ")

**FIGURE 1**

Note	COD E1	COD E2	STRI NG	new code added to Dictionary	Output
Read the first input	65 ("A")				"A"
Read the next code		66 ("B")	"B"		
Output STRING and add new entry to the dictionary				256 ("AB")	"B"
Read the next code	66	256	"AB"		
Output STRING and add new entry to the dictionary				257 ("BA")	"AB"
Read the next code	256	258			
Code 258 is not in the dictionary			"ABA "		
Output STRING and add new entry to the dictionary				258 ("ABA")	"ABA"
Read the next code	258	257	"BA"		
Output STRING and add new entry to the dictionary				259 ("ABAB")	"BA"
Read the next code	257	260			
Code 260 not found in the dictionary			"BAB "		
Output STRING and add new entry to the dictionary				260 ("BAB")	"BAB"
Read the next code	260	259			
Code 259 is in the dictionary			"ABA B"		
Output STRING and add new entry to the dictionary				261("BAB A")	"ABAB"
End of input reached.					

**FIGURE 2**

Note	CODE1	CODE2	CODE1 + CODE2	new code added	output
Begin compression	65 ("A")				
"A" is the best match, output CODE1	65 ("A")				65 ("A")
Find best-matched CODE2	65 ("A")	66 ("B")	"AB"		
Add it to the dictionary				256 ("AB")	
Find best-matched CODE1	66 ("B")				
output CODE1	66 ("B")				66 ("B")
Find best-matched CODE2	66 ("B")	256 ("AB")	"BAB"		
Add it to the dictionary				257 ("BAB")	
Find best-matched CODE1	256 ("AB")				
output CODE1	256 ("AB")				256 ("AB")
Find best-matched CODE2	256 ("AB")	256 ("AB")	"ABAB"		
Add it to the dictionary				258 ("ABAB")	
Find best-matched CODE1	258 ("ABAB")				
output CODE1	258 ("ABAB")				258 ("ABAB")
Find best-matched CODE2	258 ("ABAB")	258 ("AB AB")	"ABABABA B"		
Add it to the dictionary				259 ("ABABA BAB")	
Find best-matched CODE1	259 ("ABABA BAB")				
output CODE1	259 ("ABABA BAB")				259 ("ABABA BAB")
No more input, end of compression					

**FIGURE 3**

Note	COD E1	COD E2	new code added	Output
Read the first input	65 ("A")			
Yes, there is more input	65 ("A")			
Output string defined by CODE1	65 ("A")			66("A")
Read the next code, CODE2	65 ("A")	66 ("B")		
CODE2 is in the dictionary, add CODE1::CODE2	65 ("A")	66 ("B")	256("AB")	
CODE1 <- CODE2	66 ("B")			
Yes, there is more input	66 ("B")			
Output string defined by CODE1	66 ("B")			66 ("B")
Read the next code, CODE2	66 ("B")	256		
CODE2 is in the dictionary, add CODE1::CODE2	66 ("B")	256	257("BAB")	
CODE1 <- CODE2	256			
Yes, there is more input	256			
Output string defined by CODE1	256			256 ("AB")
Read the next code, CODE2	256	258		
CODE2 is not in the dictionary, add CODE1::CODE1	256	258	258("ABAB")	
CODE1 <- CODE2	258			
Yes, there is more input	258			
Output string defined by CODE1	258			258("ABAB")
Read the next code, CODE2	258	259		
CODE2 not in the dictionary, add CODE1::CODE1	258	259	259("ABABABAB")	
CODE1 <- CODE2	259			
No more input	259			
Output string defined by CODE1	259			259("ABABA BAB")
End of decompression				

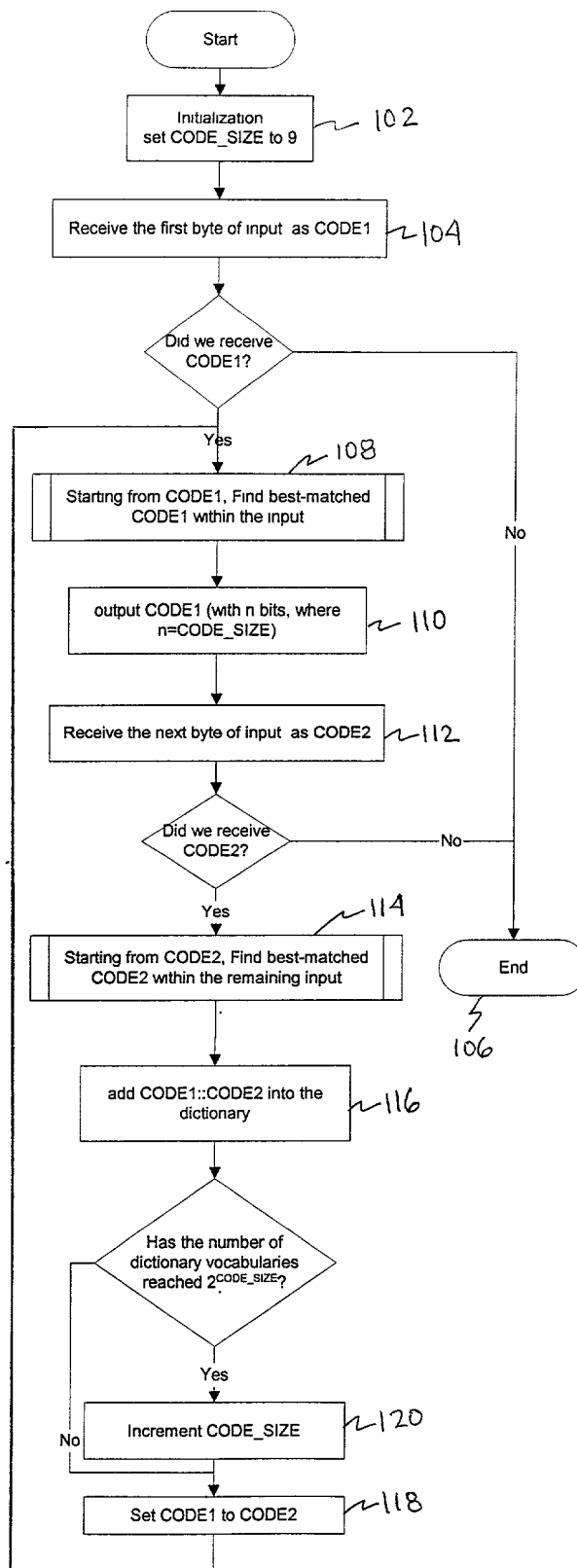
**FIGURE 4**

Compression Engine		Decompression Engine	
Output Transmitted	Vocabulary Added	Input Received	Vocabulary Added
65 ("A")			
	256("AB")	65 ("A")	
66 ("B")			
	257("BAB")	66 ("B")	
			256("AB")
256 ("AB")			
	258("ABAB")	256 ("AB")	
			257("BAB")
258("ABAB")			
	259("ABABAB AB")	258("ABAB")	
			258("ABAB")
259("ABABAB AB")			
		259("ABABAB AB")	
			259("ABABABA B")

**FIGURE 5**

09040108001  
T09090 T0902650

**FIGURE 6A**



**FIGURE 6B**

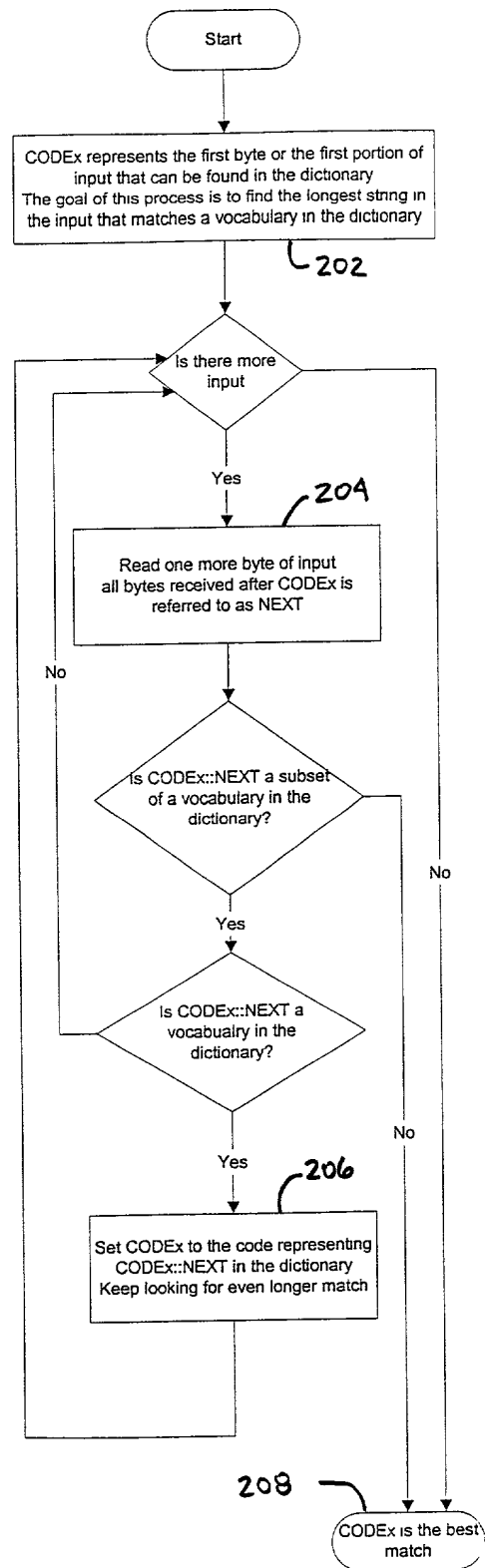
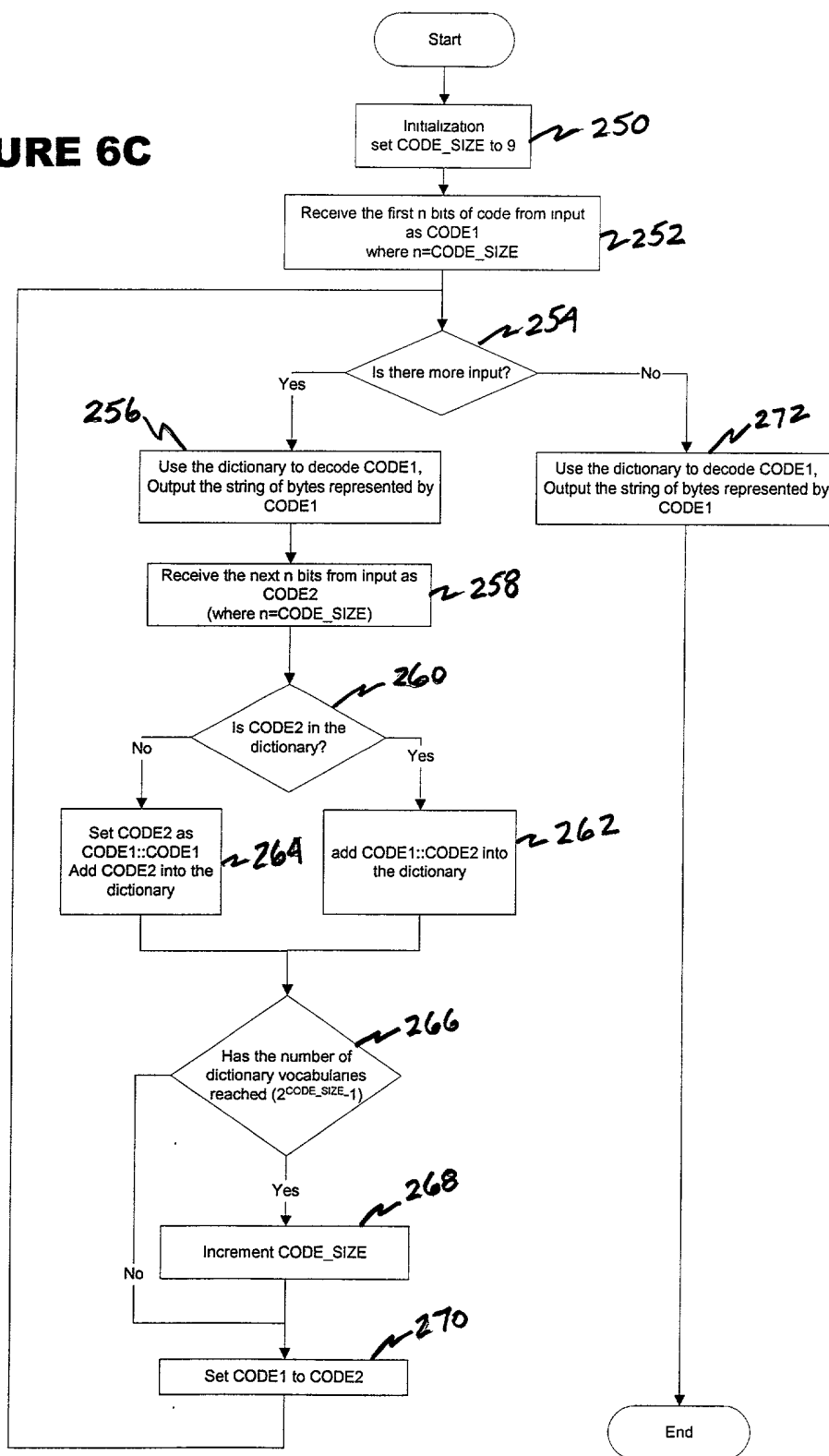


FIGURE 6C





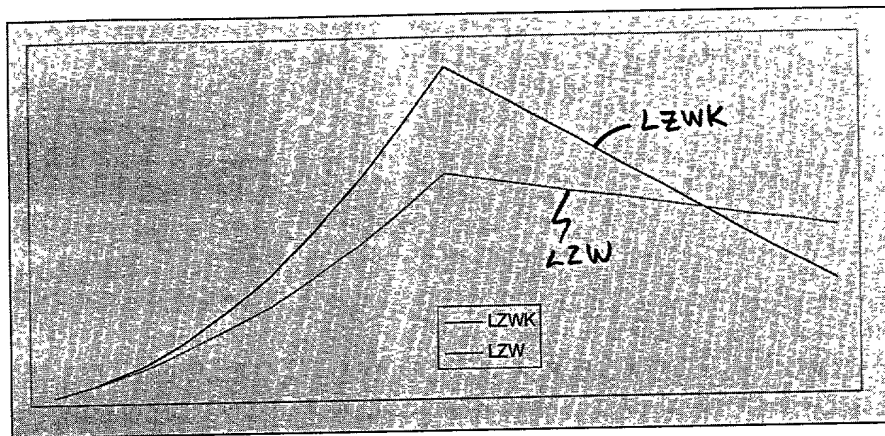


Figure 7

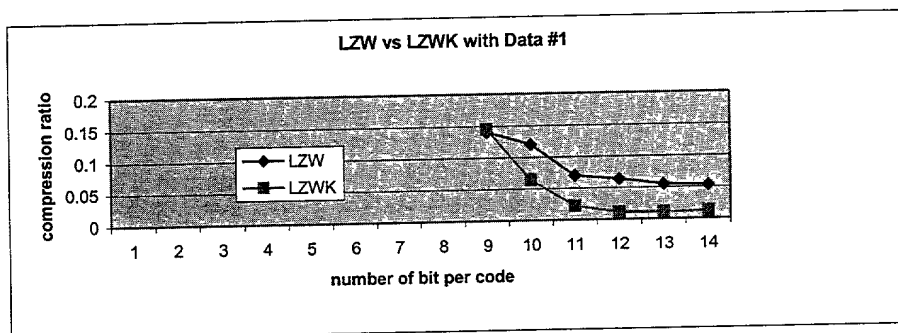


Figure 8

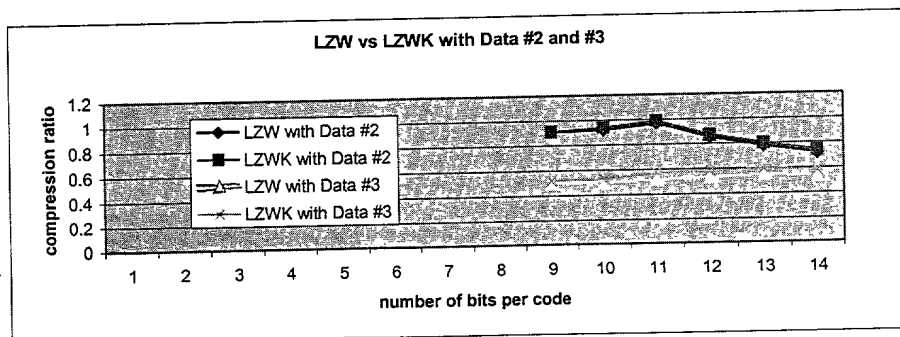


Figure 9